

REMARKS

The application has been amended to place it in condition for allowance at the time of the next Official Action.

Specification objection

The specification is amended to include section headings to address the specification objection noted in the Official Action. No new matter is added.

Claim status

Claims 1-17 remain in this application.

35 USC 102 rejection

Claims 1-17 were rejected under 35 USC 102(b) as being anticipated by DUXANS et al. ("Estimation of GMM in voice conversion including unaligned data", Proceedings of Eurospeech 2003 Conference, September 2003, pages 861-864). That rejection is respectfully traversed.

Claim 1 is amended and recites that the transformation comprises a step for applying only **selected ones of the transformation elements of the determined** at least one transformation function to the signal to be converted (see page 10, lines 14-18, for example).

It is submitted that DUXANS does not disclose at least the above-noted features of claim 1.

Rather, DUXANS concerns a method of voice conversion where the amount of available source voice data is much greater than the amount of target voice data. In particular the document deals with incorporating the unaligned source data into the training phase of the voice conversion method.

Accordingly, instead of applying only part of a determined transformation function as is required by claim 1, DUXANS in fact applies the full transformation function and either:

- 1) Re-estimates the GMM model estimated from the aligned source-target vectors to take into account unaligned data, then a full transformation function is applied to the model, or

- 2) Completes the missing data by estimating the alignment of source vectors. This is done by transforming aligned vectors and using an EM algorithm and then transforming the non-aligned vectors with the new regression function and recalculating a new GMM over the joint set.

In each case a full predetermined transformation function is used or modified. There is no disclosure or suggestion in DUXANS of only a selected part of a predetermined transformation function being used.

The method as defined by claim 1 has the technical advantage that the computation time necessary for implementation of the voice conversion method is reduced, thereby providing a voice conversion system which is fast and of good quality.

DUXANS does not recognize this advantage and indeed, teaches a contrary method since the aim of DUXANS is to complete missing data, which results in a longer computational time since transformation models are re-estimated and re-used to take into account unaligned source data.

Therefore, DUXANS does not anticipate claim 1 and the claims that depend therefrom.

Independent system claim 11 is amended along the lines of claim 1 and thus, similar arguments as to claim 1 apply to corresponding system claim 11 and the claims that depend therefrom.

In view of the present amendment and the foregoing remarks it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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